



Complete Summary

TITLE

Asthma: percentage of patients aged 5 to 40 years diagnosed with mild, moderate, or severe persistent asthma who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment.

SOURCE(S)

Physician Consortium for Performance Improvement™. Clinical performance measures: asthma. Tools developed by physicians for physicians. Chicago (IL): American Medical Association (AMA); 2005. 6 p. [13 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of patients aged 5 to 40 years diagnosed with mild, moderate, or severe persistent asthma who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment.

RATIONALE

According to National Asthma Education and Prevention Program Expert Panel Report 2 guidelines, a stepwise approach to therapy is recommended to maintain long-term control: ^{*,**}

Step 1: Mild Intermittent Asthma

No daily medication needed

Step 2: Mild Persistent Asthma

Preferred treatment: Low-dose inhaled corticosteroids (ICS)

Alternative treatment: cromolyn sodium, leukotriene modifier, nedocromil sodium, OR sustained-release theophylline

Step 3: Moderate Persistent Asthma

Preferred treatment: Low-medium dose ICS + long-acting inhaled beta₂-agonists (LABA)^{***}

Alternative treatment: Increase medium-dose ICS OR low-medium dose ICS and either leukotriene modifier or theophylline

(If needed, may increase ICS within medium-dose range in either treatment.)

Step 4: Severe Persistent Asthma

Preferred treatment: High-dose ICS + LABA^{***} AND, if needed, corticosteroid tablets or syrup long term

NOTE: For therapy steps 1-4, studies comparing ICS to cromolyn sodium, nedocromil sodium, theophylline, or leukotriene receptor antagonists are limited, but available evidence shows that none of these long-term control medications appear to be as effective as ICS in improving asthma outcomes.

For quick relief for all patients, a short-acting bronchodilator is recommended as needed for symptoms.

*See table of treatment recommendations in the original measure documentation for recommended dosages and other information.

**If optimal control of asthma is not achieved and sustained at any step of care, several actions may be considered, including: assessment of patient adherence and technique in using medications correctly; step up to the next higher step of care; consultation with an asthma specialist.

***In patients with moderate or severe persistent asthma, strong evidence indicates that use of LABA in combination with ICS leads to improvements in lung function and symptoms, and reduced supplemental bronchodilator use. LABA is not recommended for use as monotherapy.

PRIMARY CLINICAL COMPONENT

Asthma; inhaled corticosteroids; long-acting inhaled beta₂-agonists; cromolyn sodium; leukotriene modifier; nedocromil sodium; theophylline

DENOMINATOR DESCRIPTION

All patients aged 5 to 40 years with diagnosed mild, moderate, or severe persistent asthma

NUMERATOR DESCRIPTION

Patients in the denominator who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [Expert Panel Report: guidelines for the diagnosis and management of asthma. Update on selected topics.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Variation in quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Centers for Disease Control and Prevention (CDC). Asthma prevalence, health care use and mortality, 2000-2001. [internet]. Hyattsville (MD): National Center for Health Statistics, Centers for Disease Control and Prevention (CDC); 2003[updated 2003 Jan 28]; [cited 2003 May 01].

From the Centers for Disease Control and Prevention. Self-reported asthma prevalence and control among adults--United States, 2001. JAMA 2003 May 28;289(20):2639-40. [PubMed](#)

National Asthma Education and Prevention Program (NAEPP). NAEPP expert panel report 2: guidelines for the diagnosis and management of asthma. Bethesda (MD): U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Heart, Lung and Blood Institute; 1997 Jul. 146 p.

National Asthma Education and Prevention Program (NAEPP). NAEPP expert panel report: guidelines for the diagnosis and management of asthma-update on selected topics 2002. Bethesda (MD): National Heart, Lung and Blood Institute (NHLBI); 2002 Jul. 6 p.

National Committee for Quality Assurance (NCQA). The state of managed care quality 2001. Washington (DC): National Committee for Quality Assurance (NCQA); 2001.

State of Use of the Measure

STATE OF USE

Pilot testing

CURRENT USE

Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Community Health Care
Managed Care Plans
Physician Group Practices/Clinics
Rural Health Care

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Advanced Practice Nurses
Physician Assistants
Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age 5 to 40 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

More than 30 million individuals in the United States have been diagnosed with asthma during their lifetime.

In 2001, 12 million Americans had experienced an asthma attack in the previous year.

Despite potential risks and established clinical guidelines, recent data suggest that some patients are not being managed optimally for the disease. It has been reported that:

- In 2000, about 60% of children aged 5 to 9 years in the Health Plan Employer Data & Information Set (HEDIS)-participating managed care plans received appropriate asthma medication.
- In 2000, about 59% of adolescents aged 10 to 17 years received appropriate asthma medication.
- In 2000, about 65% of adults aged 18 to 56 years received appropriate asthma medication.

EVIDENCE FOR INCIDENCE/PREVALENCE

Centers for Disease Control and Prevention (CDC). Asthma prevalence, health care use and mortality, 2000-2001. [internet]. Hyattsville (MD): National Center for Health Statistics, Centers for Disease Control and Prevention (CDC); 2003[updated 2003 Jan 28]; [cited 2003 May 01].

From the Centers for Disease Control and Prevention. Self-reported asthma prevalence and control among adults--United States, 2001. JAMA2003 May 28;289(20):2639-40. [PubMed](#)

National Committee for Quality Assurance (NCQA). The state of managed care quality 2001. Washington (DC): National Committee for Quality Assurance (NCQA); 2001.

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Asthma is a chronic respiratory disease that places a considerable burden on those affected and results in substantial morbidity and health care utilization.

EVIDENCE FOR BURDEN OF ILLNESS

Centers for Disease Control and Prevention (CDC). Asthma prevalence, health care use and mortality, 2000-2001. [internet]. Hyattsville (MD): National Center for Health Statistics, Centers for Disease Control and Prevention (CDC); 2003[updated 2003 Jan 28]; [cited 2003 May 01].

From the Centers for Disease Control and Prevention. Self-reported asthma prevalence and control among adults--United States, 2001. JAMA2003 May 28;289(20):2639-40. [PubMed](#)

Morbidity & Mortality: 2002 chart book on cardiovascular, lung, and blood diseases. Bethesda (MD): National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH); 2002 May. 104 p.

UTILIZATION

In 2000, asthma accounted for 10.4 million outpatient visits, 1.8 million emergency department visits, 465,000 hospitalizations, and 4,487 deaths nationally.

EVIDENCE FOR UTILIZATION

Centers for Disease Control and Prevention (CDC). Asthma prevalence, health care use and mortality, 2000-2001. [internet]. Hyattsville (MD): National Center for Health Statistics, Centers for Disease Control and Prevention (CDC); 2003[updated 2003 Jan 28]; [cited 2003 May 01].

From the Centers for Disease Control and Prevention. Self-reported asthma prevalence and control among adults--United States, 2001. JAMA2003 May 28;289(20):2639-40. [PubMed](#)

COSTS

The total direct and indirect costs of asthma in the United States are estimated at more than \$14 billion annually.

EVIDENCE FOR COSTS

Morbidity & Mortality: 2002 chart book on cardiovascular, lung, and blood diseases. Bethesda (MD): National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH); 2002 May. 104 p.

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All patients aged 5 to 40 years with diagnosed mild, moderate, or severe persistent asthma

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

All patients aged 5 to 40 years with diagnosed mild, moderate, or severe persistent asthma

Exclusions

Documentation of patient reason(s)* for not prescribing either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment

*Patient reasons for not prescribing either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment (e.g., economic, social, and/or religious, etc.).

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition

DENOMINATOR TIME WINDOW

Time window follows index event

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Patients in the denominator who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment*.

*See table of treatment recommendations in the original measure documentation for recommended dosages and other information.

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record
Pharmacy data

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

None

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Asthma: pharmacologic therapy.

MEASURE COLLECTION

[The Physician Consortium for Performance Improvement Measurement Sets](#)

MEASURE SET NAME

[Physician Consortium for Performance Improvement: Asthma Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the Physician Consortium for Performance Improvement

DEVELOPER

Physician Consortium for Performance Improvement

ENDORSER

National Quality Forum

INCLUDED IN

Ambulatory Care Quality Alliance

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2003 Oct

REVISION DATE

2005 Aug

MEASURE STATUS

This is the current release of the measure.

This measure updates a previous version: Physician Consortium for Performance Improvement. Clinical performance measures: asthma. Tools developed by physicians for physicians. Chicago (IL): American Medical Association (AMA); 2003. 6 p.

SOURCE(S)

Physician Consortium for Performance Improvement™. Clinical performance measures: asthma. Tools developed by physicians for physicians. Chicago (IL): American Medical Association (AMA); 2005. 6 p. [13 references]

MEASURE AVAILABILITY

The individual measure, "Asthma: Pharmacologic Therapy," is published in the "Clinical Performance Measures: Asthma." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

COMPANION DOCUMENTS

The following are available:

- Physician Consortium for Performance Improvement. Introduction to physician performance measurement sets. Tools developed by physicians for physicians. Chicago (IL): American Medical Association (AMA); 2001 Oct. 21 p. This document is available from the American Medical Association (AMA) Clinical Quality Improvement Web site: www.ama-assn.org/go/quality.
- Physician Consortium for Performance Improvement. Principles for performance measurement in health care. A consensus statement. [online]. Chicago (IL): American Medical Association (AMA), Joint Commission on the Accreditation of Healthcare Organizations (JCAHO), National Committee for Quality Assurance (NCQA); [3 p]. This document is available from the AMA Clinical Quality Improvement Web site: www.ama-assn.org/go/quality.
- Physician Consortium for Performance Improvement. Desirable attributes of performance measures. A consensus statement. [online]. American Medical Association (AMA), Joint Commission on Accreditation of Healthcare Organizations (JCAHO), National Committee for Quality Assurance (NCQA); 1999 Apr 19 [cited 2002 Jun 19]. [5 p]. This document is available from the AMA Clinical Quality Improvement eb site: www.ama-assn.org/go/quality.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI on February 26, 2004. The information was verified by the measure developer on September 29, 2004. This NQMC summary was updated by ECRI on September 28, 2005.

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